

January 23, 2014

Nevada Conservation Credit System SEC Meeting



OBJECTIVES

- Define SEC Committee engagement
- Establish understanding of framework and considerations
- Gain initial thoughts on design considerations

AGENDA

Subject

Speaker

SEC Committee Engagements

Eoin

Habitat Quantification Tool Update

Steven

Credit System Manual Overview

Jeremy

THANK YOU

- **Tim Rulald and the Sagebrush Ecosystem Technical Team**
- **Jen Newmark – NV Natural Heritage Program**
- **Technical Review Group**

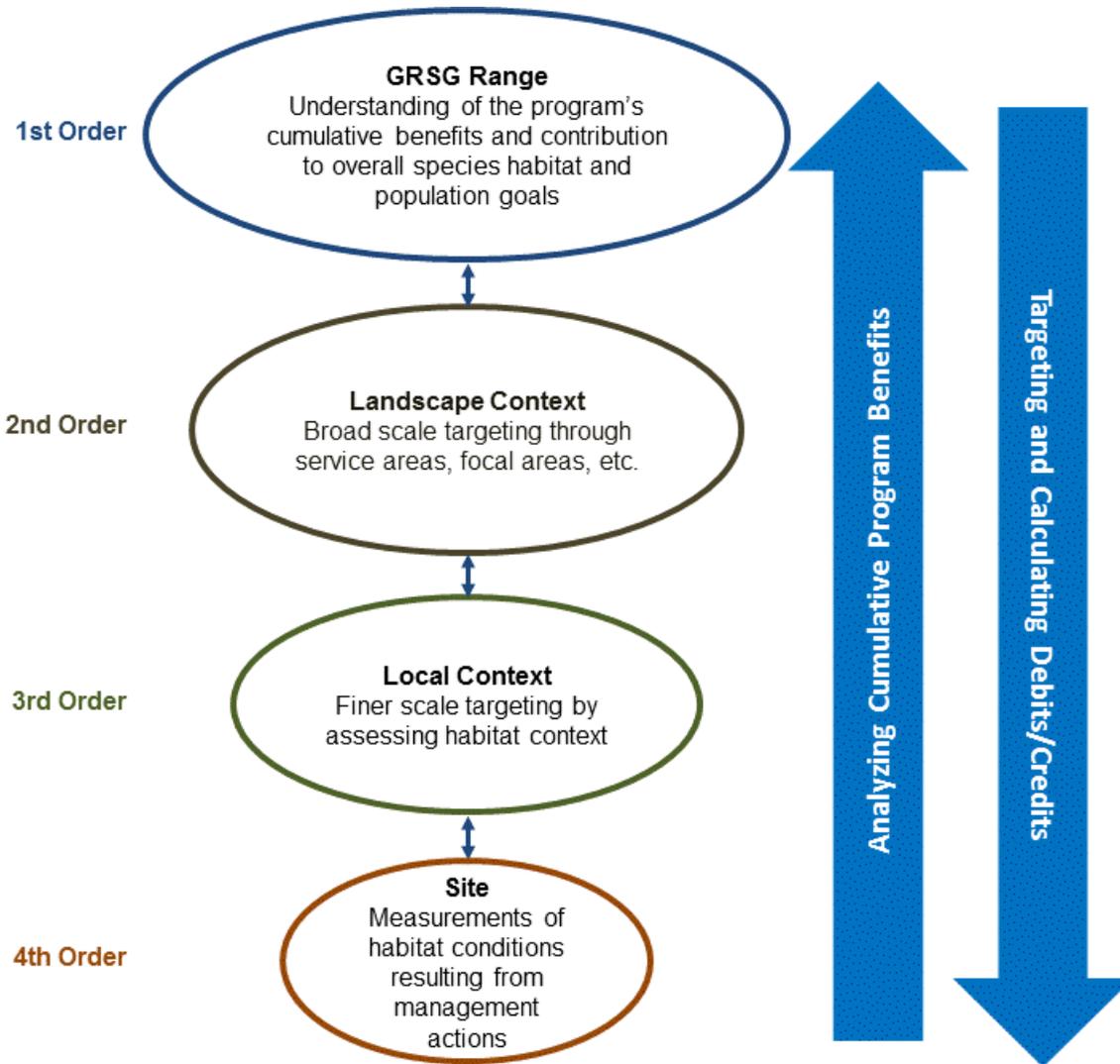
For moving ahead quickly

Note: these slides have not been thoroughly reviewed by the above due to time constraints

HABITAT QUANTIFICATION TOOL TECHNICAL REVIEW GROUP

- James Sedinger (UNR)
- Jean Chambers (FS)
- Ron Baxter (FWS)
- Sandra Brewer (BLM)
- Shawn Espinosa (NDOW)

HABITAT QUANTIFICATION TOOL FRAMEWORK & TRG REVIEW



CONSERVATION CREDIT SYSTEM

INTRODUCTION

- 1) Goal**
- 2) Guiding Principles**
- 3) Scope**
- 4) Organizational Structure & Roles**
- 5) Benefits of Participation
- 6) Approach
- 7) Policy & Operational Overview

CONSERVATION CREDIT SYSTEM GOAL

Efficiently achieve no net unmitigated loss of Greater Sage-Grouse habitat due to anthropogenic disturbances.

GUIDING PRINCIPLES

- Produce high quality conservation where it makes significant ecological difference
- Foster transparency, accountability, and credibility
- Improve the effectiveness of greater sage-grouse conservation efforts and the efficiency of the Conservation Credit System over time
- Base decisions on the best available science
- Create an efficient and friendly marketplace, where every transaction is anticipated to result in a net benefit for the greater sage-grouse

CONSERVATION CREDIT SYSTEM

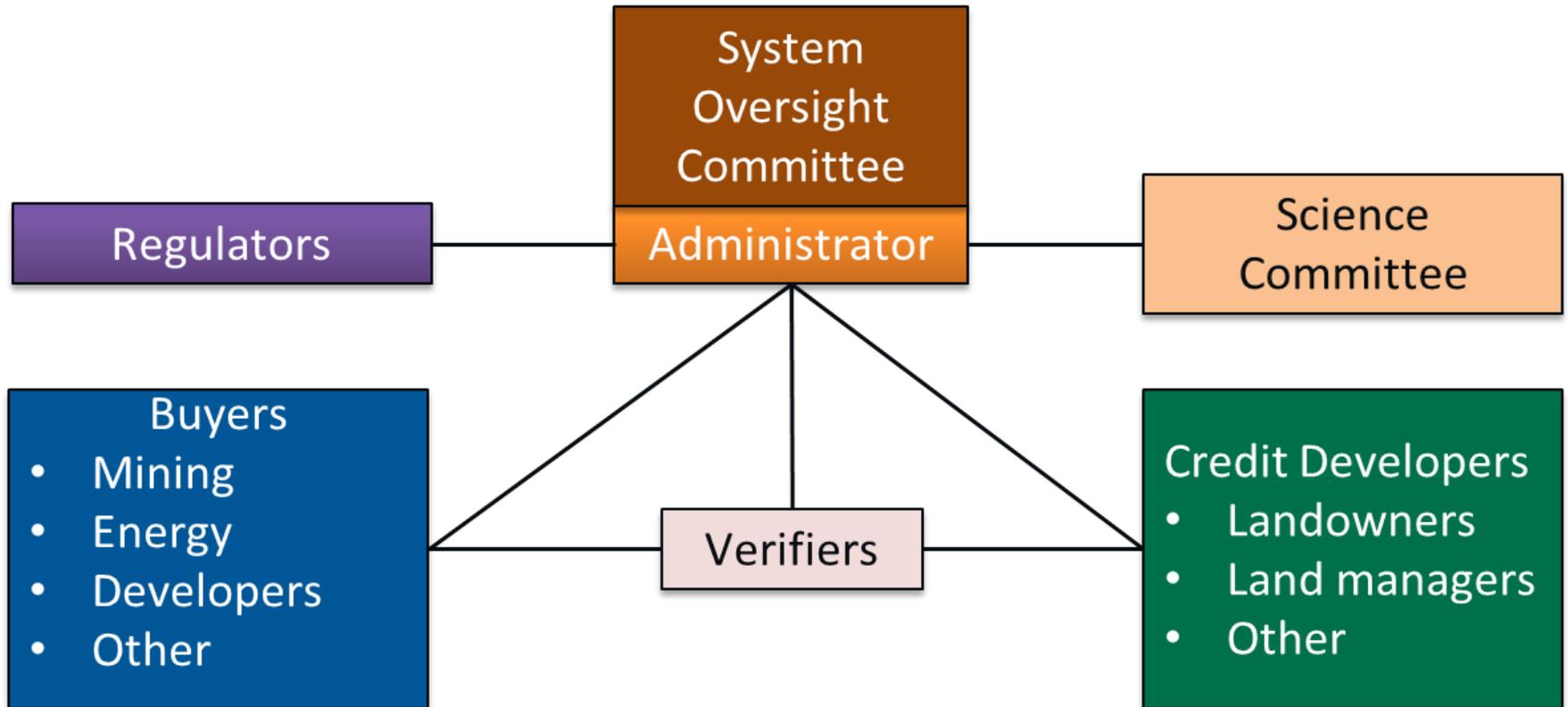
SCOPE

- ✓ Anthropogenic impacts
- ✓ Benefits from offset project

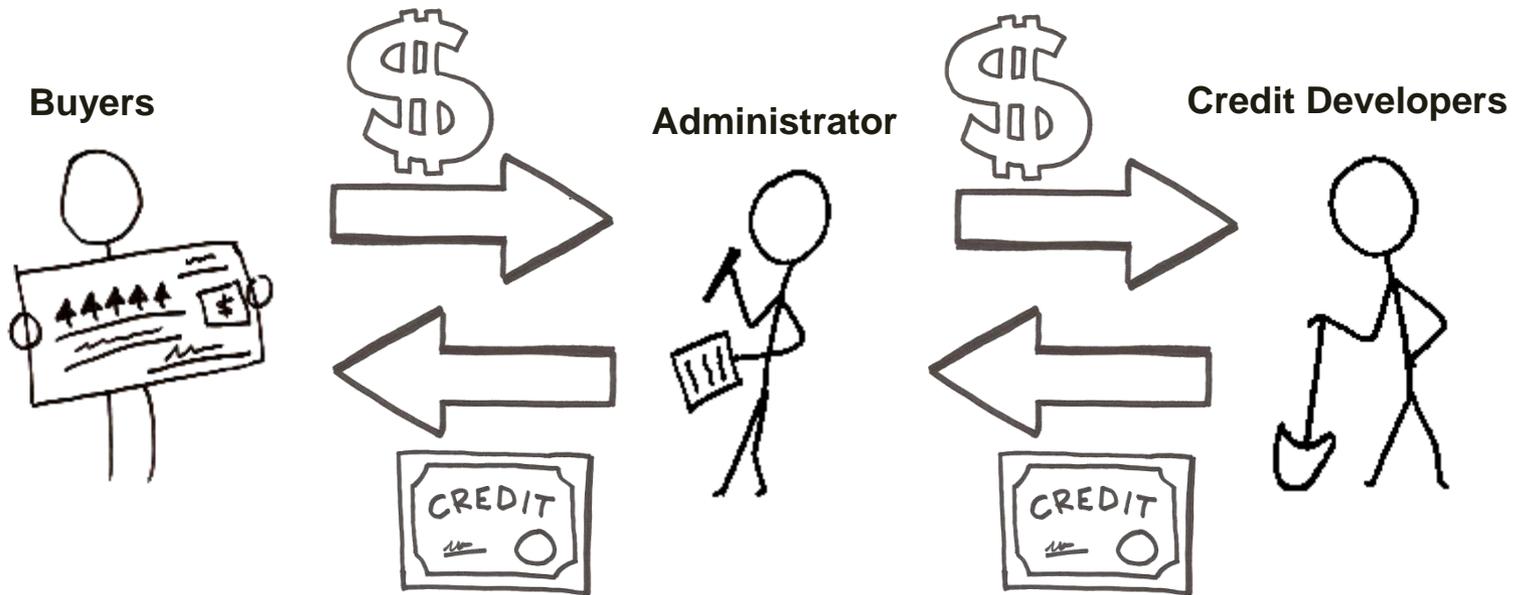
- Natural disturbances
- Non-mitigation habitat conservation programs
- Public land management actions
- Other sage-brush dependent species
- Overall ecosystem health

Potential
future
expansion of
CCS

ORGANIZATIONAL STRUCTURE & ROLES

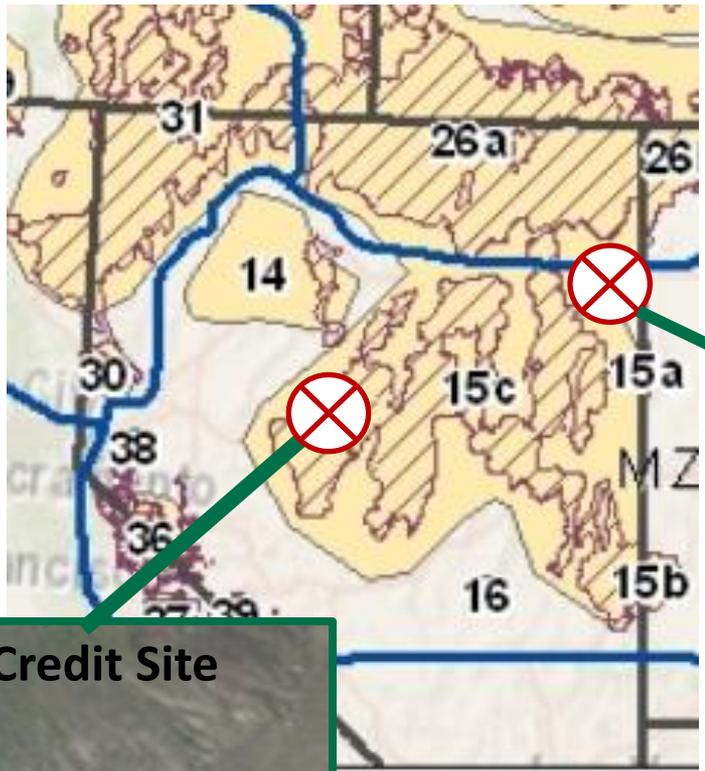


APPROACH

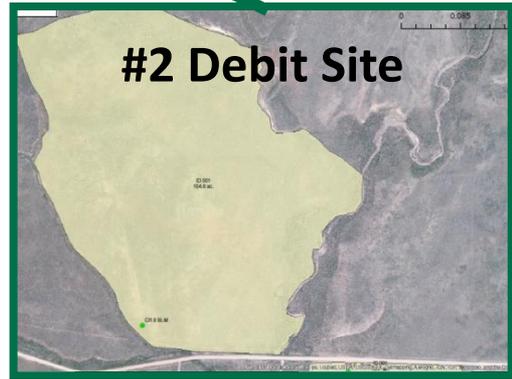




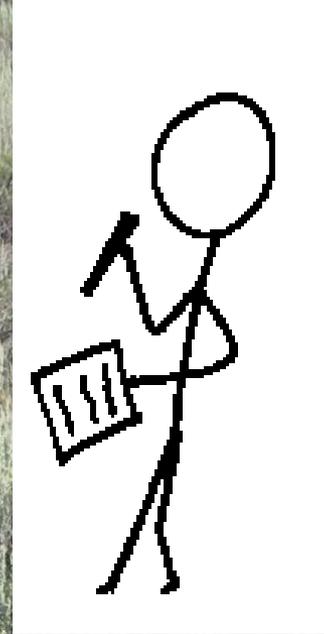
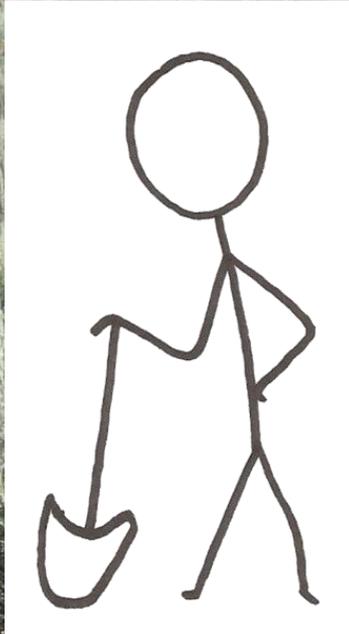
EXAMPLE PROJECT SCENARIOS



-  Management Zones
-  Sage-Grouse PACs
-  GSG Populations



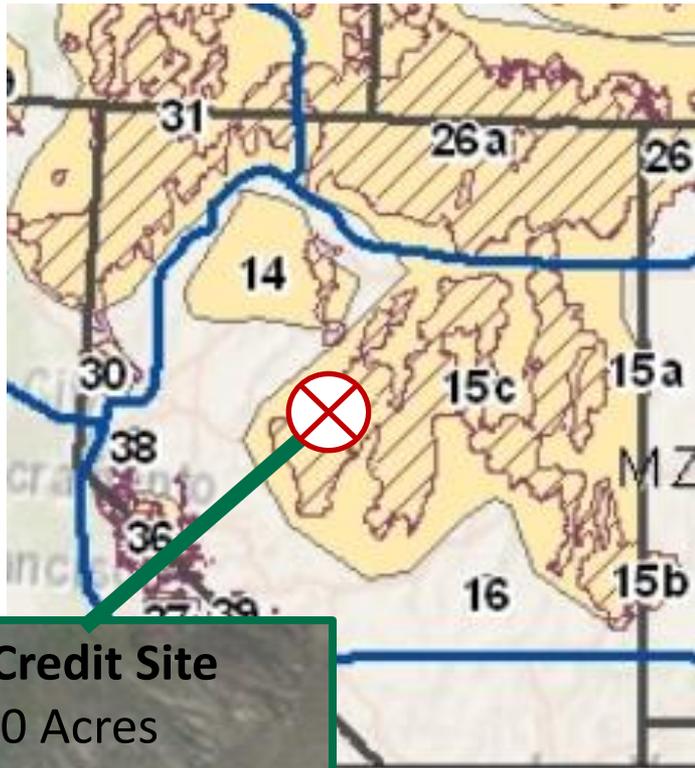
CREDIT SITE



SELECT & VALIDATE SITE



Determine if site is valid to participate in the Credit System



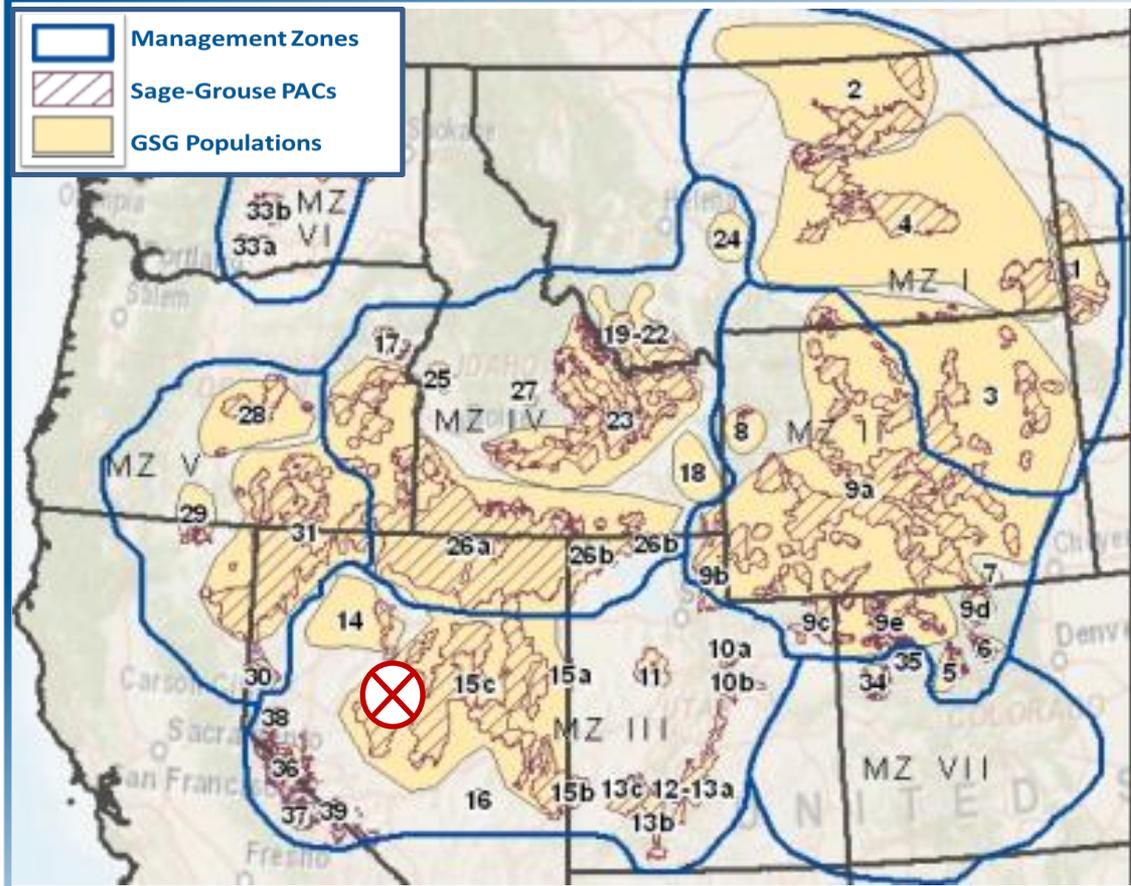
#1 Credit Site

- 1,000 Acres
- Location
- Proposed Actions

SITE VALIDATION CONSIDERATIONS

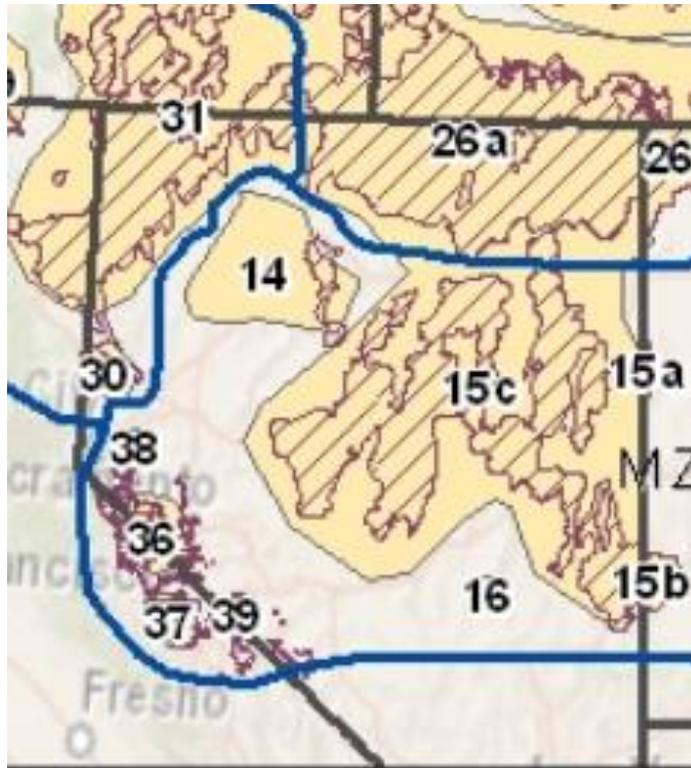
Service Areas – Is Susan's ranch in a greater sage-grouse service area?

 Management Zones
 Sage-Grouse PACs
 GSG Populations



1	Dakotas	13b	Panguitch	29	Klamath
2	Northern Montana	13c	Bald Hills	30	Warm Springs Valley
3	Powder River Basin	14	Northwest Interior	31	Western Great Basin
4	Yellowstone Watershed	15a	Ibapah	32a	Moses Coulee
5	Eagle-South Routt	15b	Hamlin Valley	32b	Crab Creek
6	Middle Park	15c	Southern Great Basin	33a	Yakama Indian Nation
7	Laramie	16	Guinn Canyon Range	33b	Yakima Training Center
8	Jackson Hole	17	Baker	34	Parachute-Piceance-Roan Basin
9a	Wyoming Basin	18	East Central	35	Meeker-White River
9b	Rich-Summit-Morgan	19-22	Southwest Montana	36	North Mono Lake
9c	Uintah	23	Snake-Salmon-Beaverhead	37	South Mono Lake
9d	North Park	24	Belt Mountains	38	Pine Nut
9e	NWCO	25	Weiser	39	White Mountains
10a	Strawberry Valley	26a	Northern Great Basin		
10b	Carbon	26b	Box Elder		
11	Sheeprock	27	Sawtooth		
12-13a	Parker Mountain-Emery	28	Central OR		

SERVICE AREAS



Service Area is a mapped geographic sub-region with ecological, practical or jurisdictional significance where credits are tracked and reported.



SITE VALIDATION CONSIDERATIONS

Other considerations to be reviewed by the Committee

- Credit Producer Confidentiality
- Site Eligibility
- Stacking of public funding

IMPLEMENT & CALCULATE CREDIT

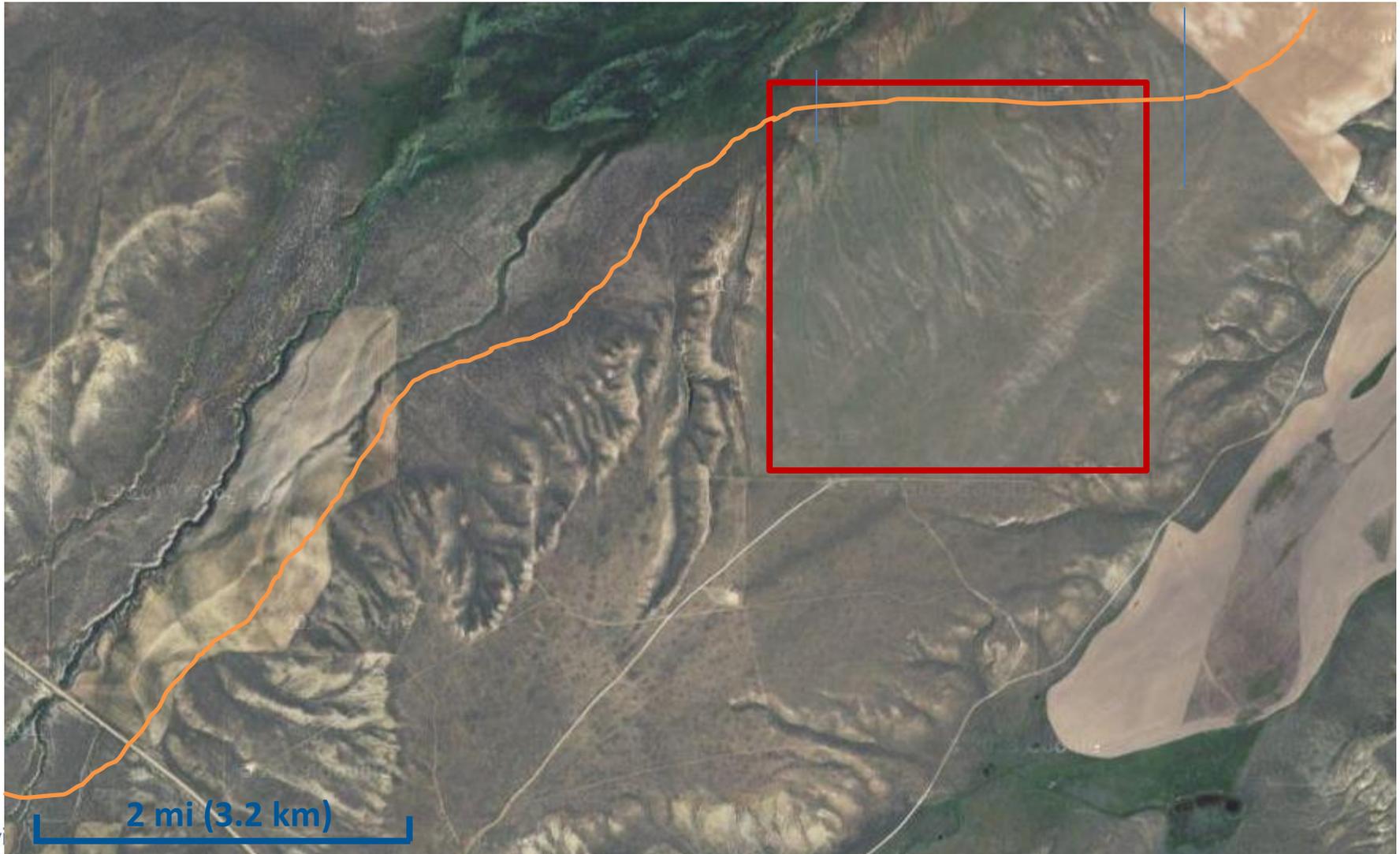


- Develop management plan
- Calculate anticipated credits
- Submit documentation

1

Conduct Pre-Field Visit
Desktop
Analysis

- Digitize the project area
- Delineate map units based on vegetative structure



2 mi (3.2 km)

Conduct Field Visit

- Confirm location of any anthropogenic structures
- Confirm map units and sampling protocol
- Collect field data using the datasheet



*native present
but 200m from P. 11/11/13*

EcoMetric
SAGE GROUSE Attribute Measurements Revised 07-01-13

Date: 07-06-13 Observers: All UTM E: 0256672
Site Name: Ayal CRP UTM N: 4469498 13T NA983
Slope: Aspect: 350°/1°
Camera / Photo #'s: TT Site is ARID or MESIC (circle one)

GRASS and FORB COVER (Small Plots)

Quad #	% Native GRASS Cover	% Invasive GRASS Cover	SOLIC Grass Height	% BROTEC Cover	# of FORB Species in Quad	% Native or Desirable FORB Cover	% Invasive FORB Cover	Distance to Suitable Cover/Refugia
1	10-25	10-25	12"	0	2	12	0	
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5	10-25	10-25	9"	0	1	12	0	
6	0	25-50	11"	0	1	12	0	
7	10-25	10-25	13"	0	1	12	0	
8	0	25-50	12"	0	1	12	0	
9	0	10-25	13"	0	2	12	0	
10	25-50	25-50	12"	0	1	12	0	

SAGEBRUSH COVER (30m x 30m)

% Estimated Sagebrush Canopy Cover for Plot:

#	Sage Height	Columnar / Spreading	#	Sage Height	Columnar / Spreading	#	Sage Height	Columnar / Spreading
1			11			21		
2			12			22		
3			13			23		
4			14			24		
5			15			25		
6			16			26		
7			17			27		
8			18			28		
9			19			29		
10			20			30		

3

Calculate Scores

- Enter data into calculator
- Calculate breeding, summer, and winter scores for each map unit
- Apply landscape scores/modifiers

Collect Field Data



Calculate Habitat Function

- Sagebrush height: xx cm
- Sagebrush canopy cover: xx%

% Cover	<5	5-15	15-20	20-30	30-40	40-50	50-60
Performance	0	0.5	1	1	0.95	0.9	0.85
% Cover	60-70	70-80	80-90	>90			
Performance	0.6	0.5	0.5	0.5			

above personal
 EcoMetric
 SAGE GROUSE Attribute Measurements
 Revised 07-01-13

Date: 07/08/13 Observers: All UTM E: 0256672
 Site Name: Ayal CAP UTM N: 4469498 13T NA083
 Slope: Aspect: 350° 10'
 Camera / Photo #'s: JJ Site is: ARID or MESIC (circle one)

GRASS and FORB COVER (Small Plots)

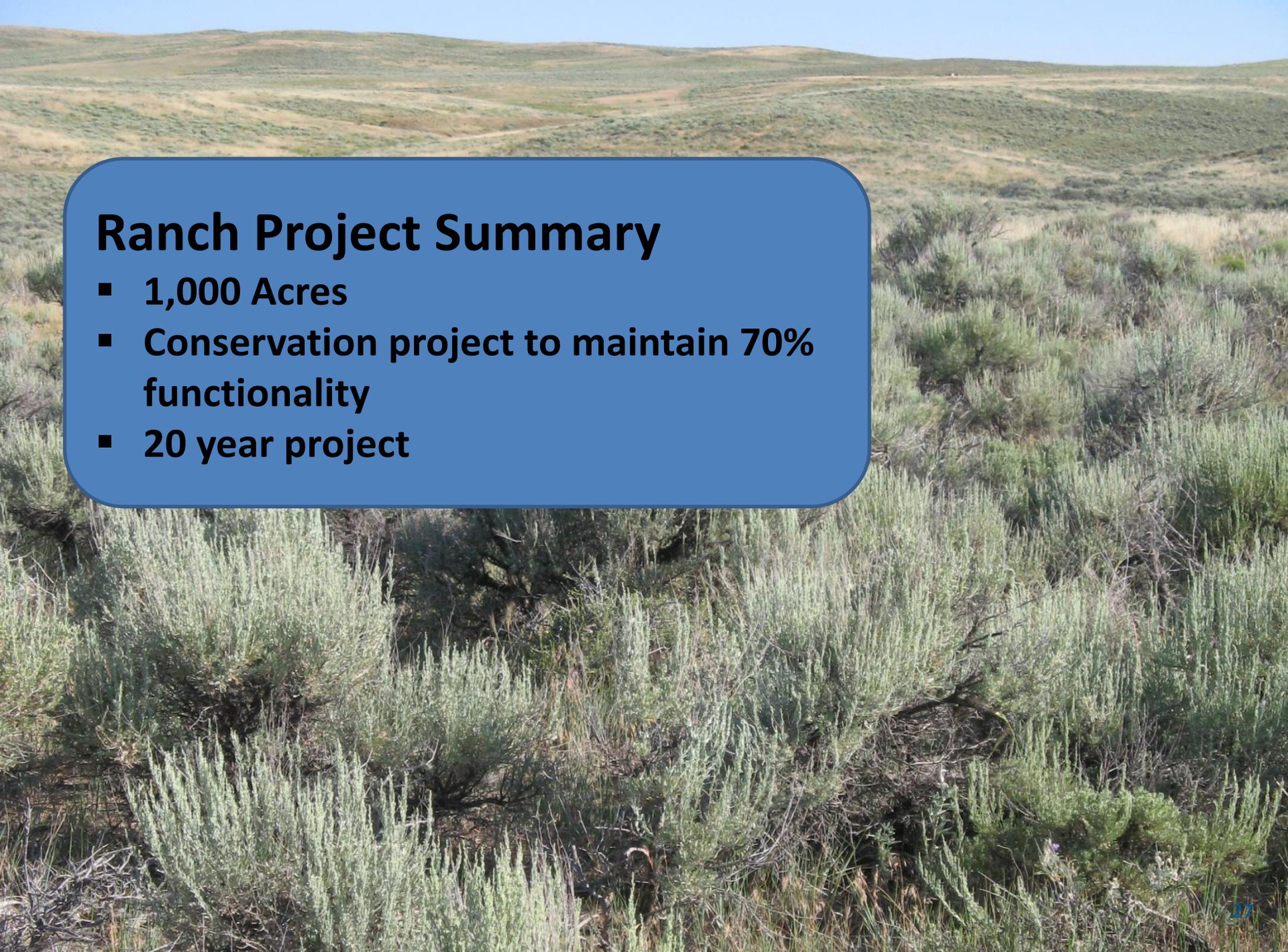
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5	10-25	10-25	9"	0	1	0.2	0	
6	0	25-50	11"	0	1	0.2	0	
7	10-25	10-25	13"	0	1	0.2	0	
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9			19			29		
10			20			30		





Ranch Project Summary

- **1,000 Acres**
- **Conservation project to maintain 70% functionality**
- **20 year project**

CREDIT CALCULATION CONSIDERATIONS

Baseline – What is the starting point for Susan to measure credits on her site?

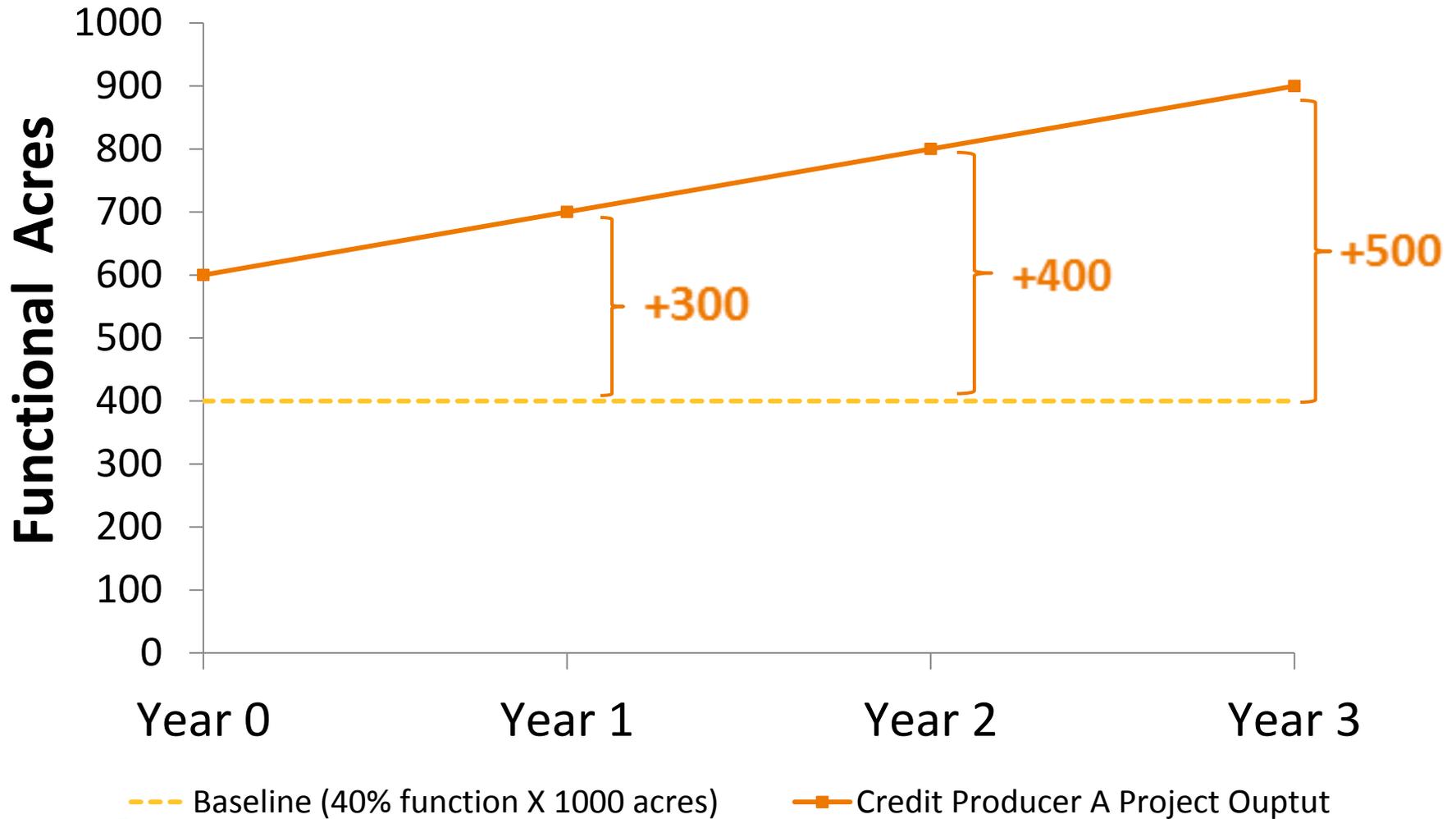
BASELINE CONSIDERATIONS

- **Additionality**
- **Equity - reward preservation efforts**
- **Practicality**

BASELINE REGIONAL STANDARDS

- Standard baseline starting point associated to the region
- Actual functional acre credit score determined using Habitat Quantification Tool on site

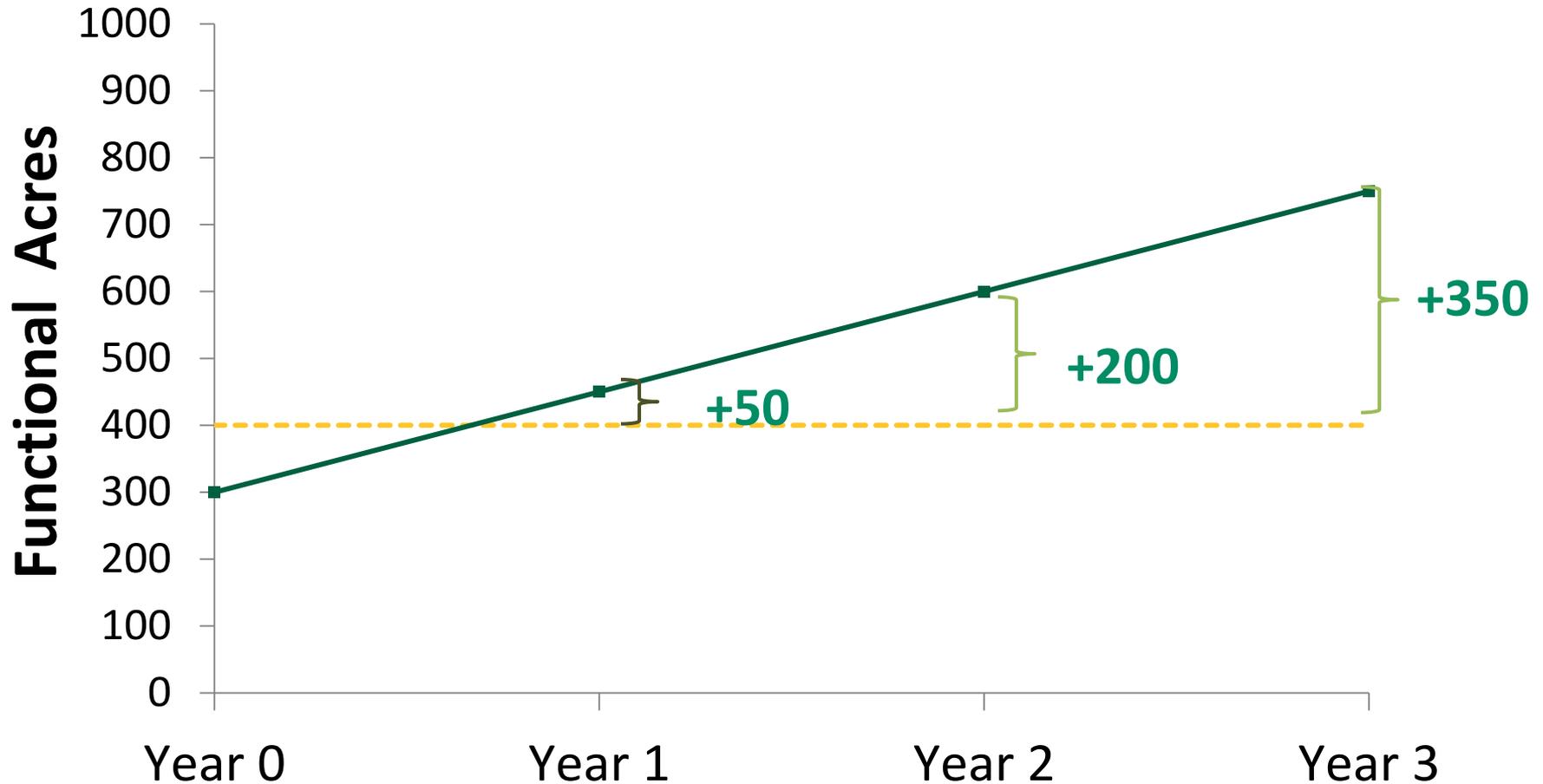
BASELINE REGIONAL STANDARDS



--- Baseline (40% function X 1000 acres)

—■ Credit Producer A Project Output

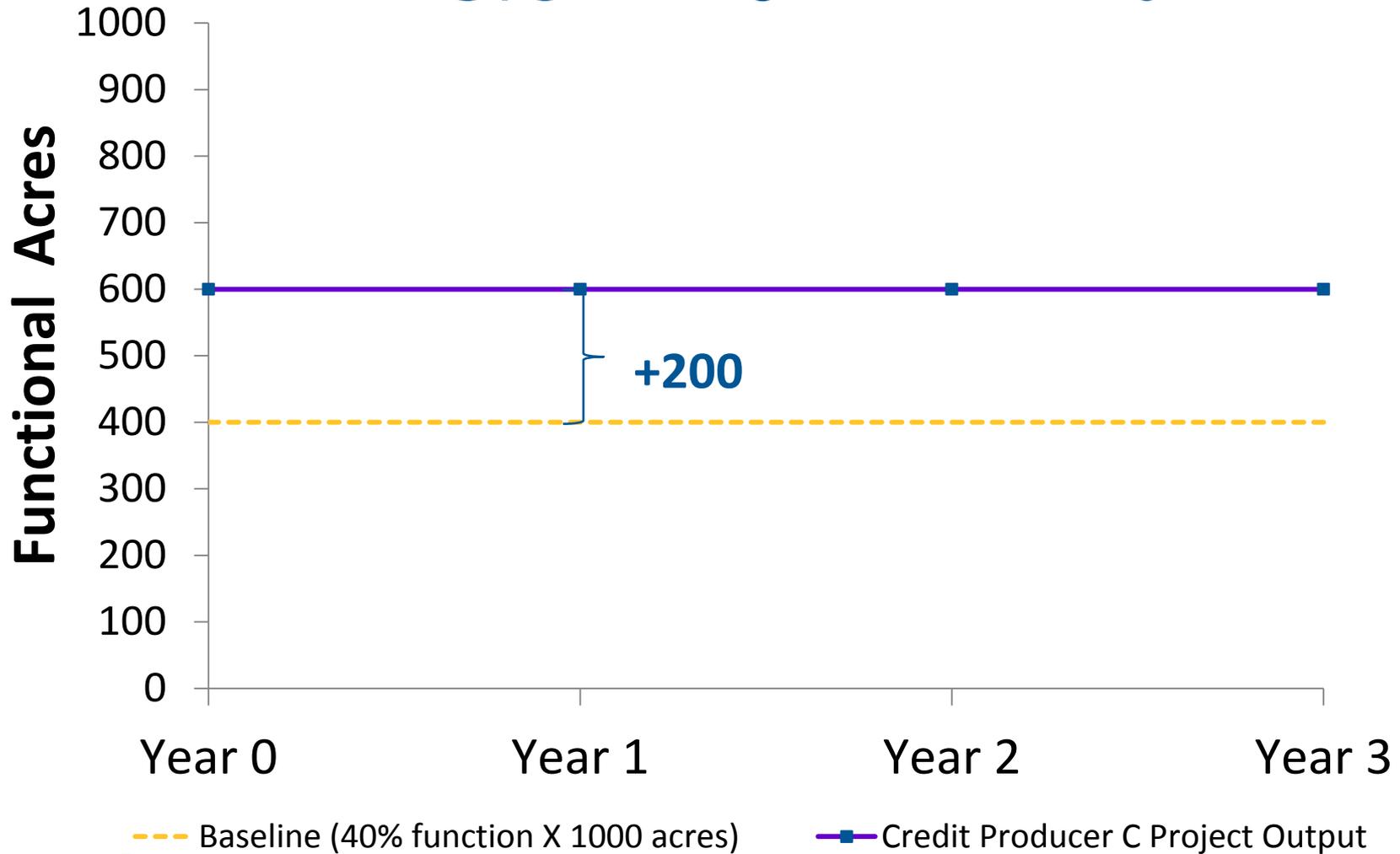
BASELINE REGIONAL STANDARDS



--- Baseline (40% function X 1000 acres)

—■ Credit Producer B Project Output

BASELINE REGIONAL STANDARDS



--- Baseline (40% function X 1000 acres)

—■ Credit Producer C Project Output

CREDIT CALCULATION CONSIDERATIONS

Other considerations to be reviewed by the Committee

- Credit Variability
- Project Life
- Performance & Financial Assurances

VERIFY CONDITIONS



Third-party verification to confirm that credit calculations match actual on-the-ground conditions.



Revised 07-01-13

EcoMetric
SAGE GROUP Attribute Measurements

Date: 07-01-13 Observers: All
 Site Name: 13T NA083
 Slope: 350% ± 1°
 Camera / Photo #s: T1
 Site: ARID or MESIC (circle one)

UTM E: 0256672
 UTM N: 4469498

GRASS and FORB COVER (Small Plots)

Quad #	Native Grass Cover	GRASS Cover	Grass Height	FORB Cover	Species in Quad	% Native or Desirable FORB Cover	% Invasive FORB Cover	Distance to Suitable Cover/Refugia
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7			17			27		
8			18			28		
9			19			29		
10			20			30		



CREDIT VERIFICATION CONSIDERATIONS

Credit Verification – How can the Administrator be sure that Susan took an accurate measurement of the habitat quality on-site?

CREDIT VERIFICATION CONSIDERATIONS

- Before first credit release
- Before increases in credit
- Every 5th year
- Spot check and audit

Ranch Project Summary

700 functional acres verified over the 20 year project



CREDIT VERIFICATION CONSIDERATIONS

Other considerations to be reviewed by the Committee

- Credit Variability
- Verification Selection & Training

REGISTER & ISSUE



- Create a Registry Account
- Register Verified Credits
- Issue Credits

Ranch Project Summary

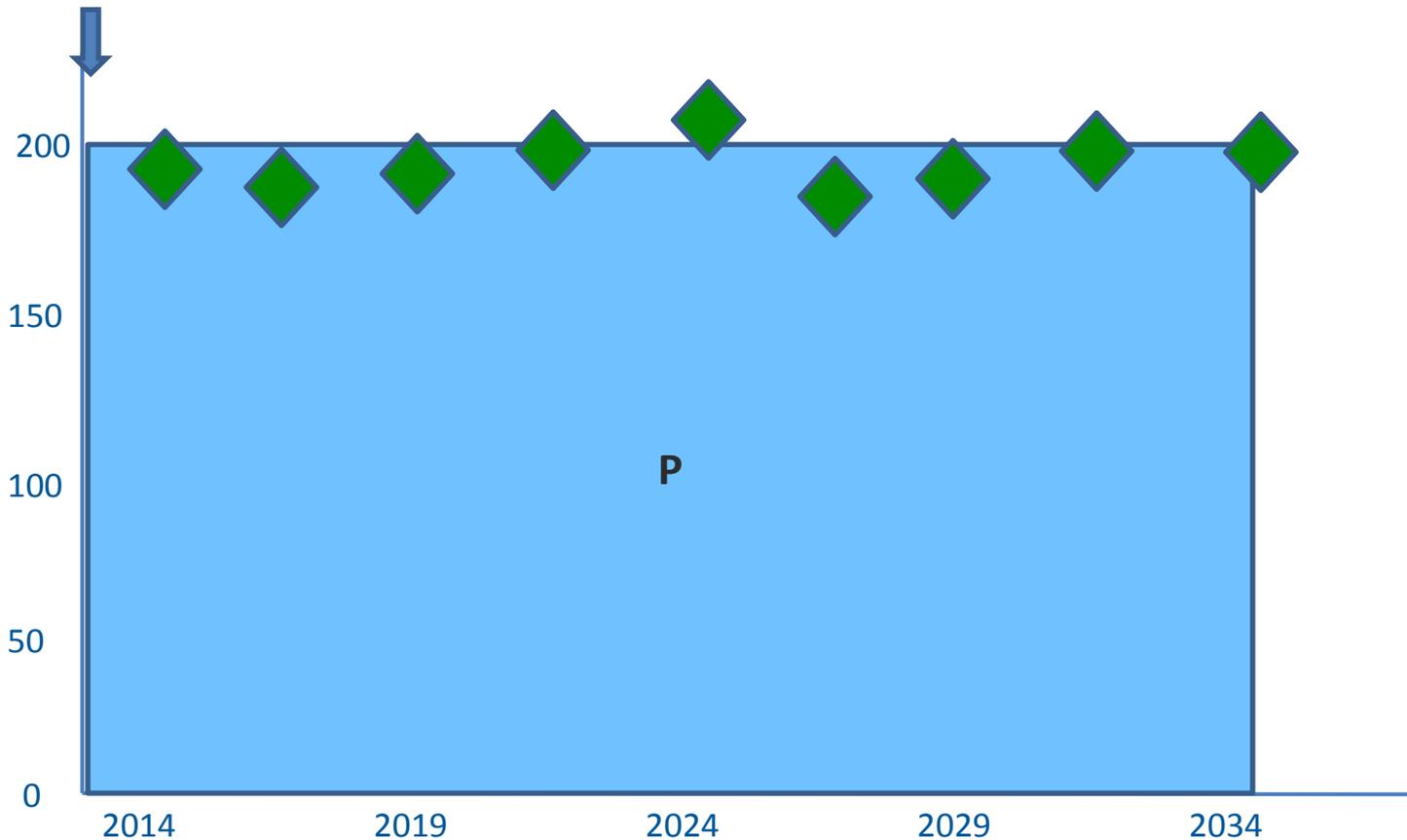
- 1,000 Acres
- Conservation project to maintain 70% functionality
- 20 year project



REGISTRATION & ISSUANCE CONSIDERATIONS

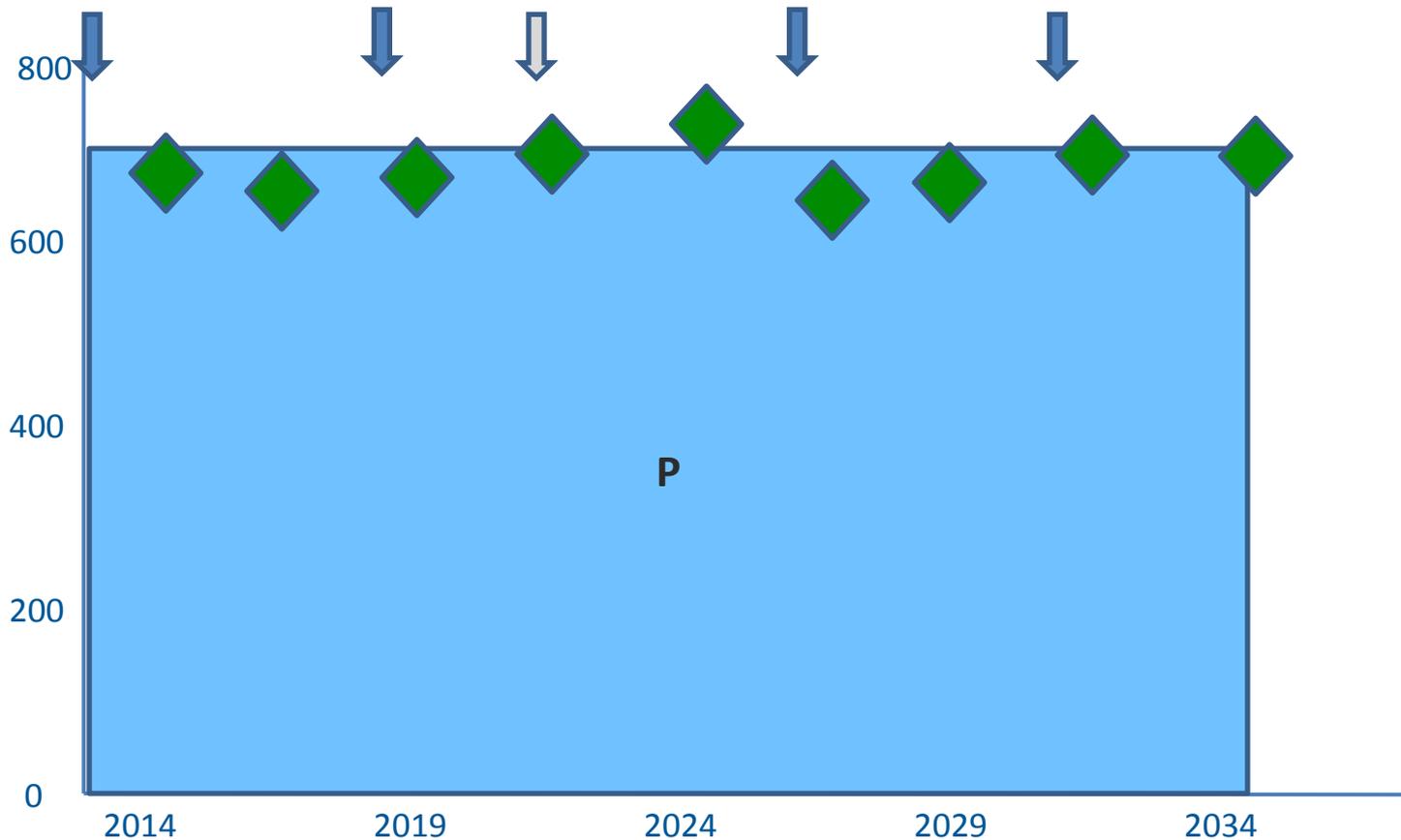
Credit Release – Now that Susan has verified the measurement on habitat quality on her ranch, how does she obtain the credits she has generated?

CREDIT RELEASE PRESERVATION PROJECT EXAMPLE



Credits Released for Performance 
On-the-Ground Benefit Generated 

CREDIT RELEASE & ONGOING VERIFICATION



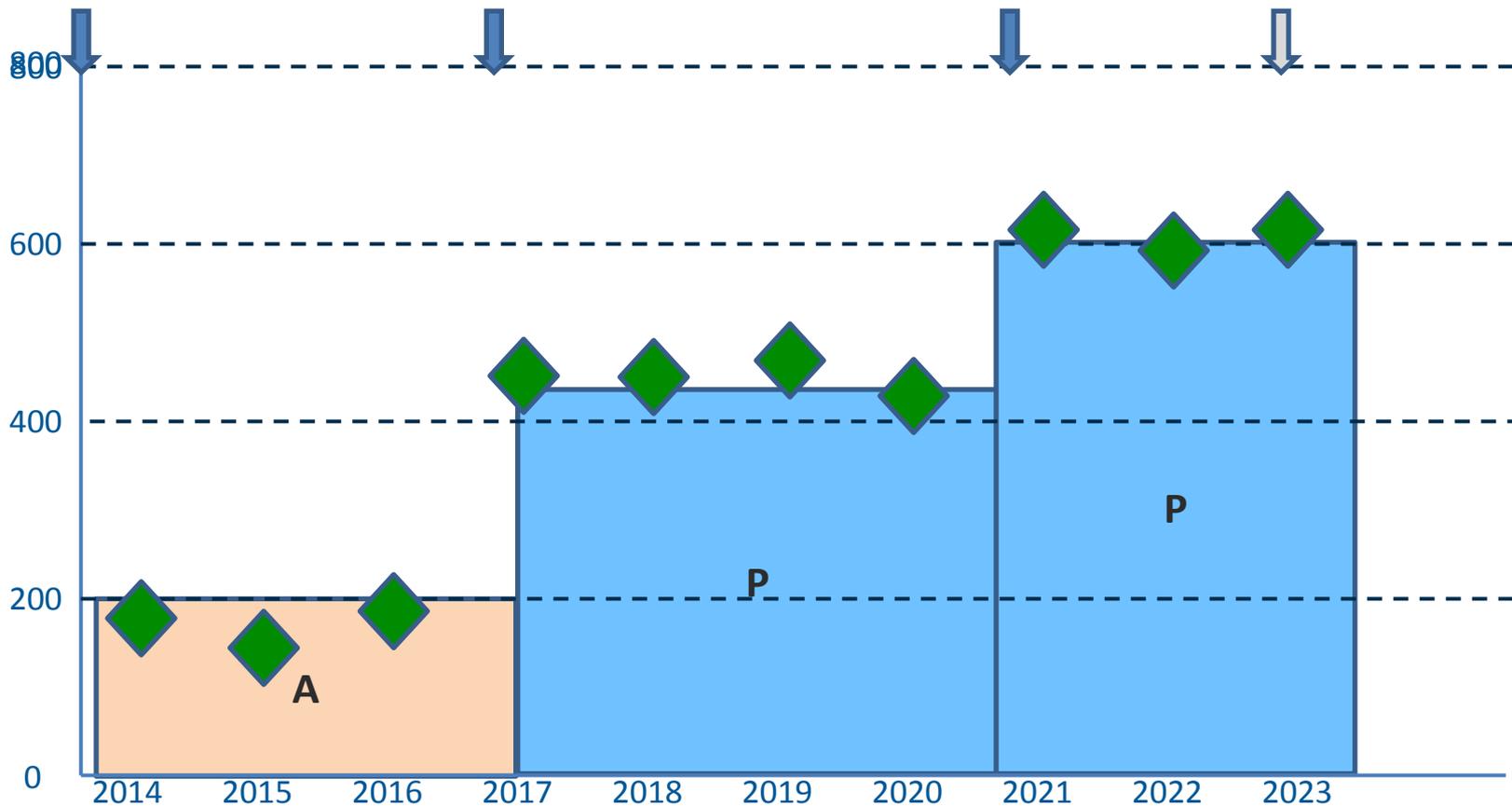
Verification
Spot Checks & Audits

CREDIT RELEASE

RESTORATION PROJECT EXAMPLE

PERFORMANCE CRITERIA ACHIEVED	CREDITS RELEASED
Milestone 1 <ul style="list-style-type: none">- Action checked: pinyon-juniper trees, fences, and other vertical structures removed- 1/3 of financial assurances secured	33% of Total Anticipated Credits
Milestone 2 <ul style="list-style-type: none">- 66% of expected HQT score at end of project- 2/3 of financial assurances secured	66% of Total Anticipated Credits
Milestone 3 <ul style="list-style-type: none">- 100% of expected HQT score for the project- All financial assurances secured	100% of Total Anticipated Credits

CREDIT RELEASE RESTORATION PROJECT EXAMPLE



Verification ↓
Spot Checks & Audits ↓

Credits Awarded for Actions A
Credits Awarded for Performance P
On-the-Ground Benefit Generated ◆

TRACK & TRANSFER



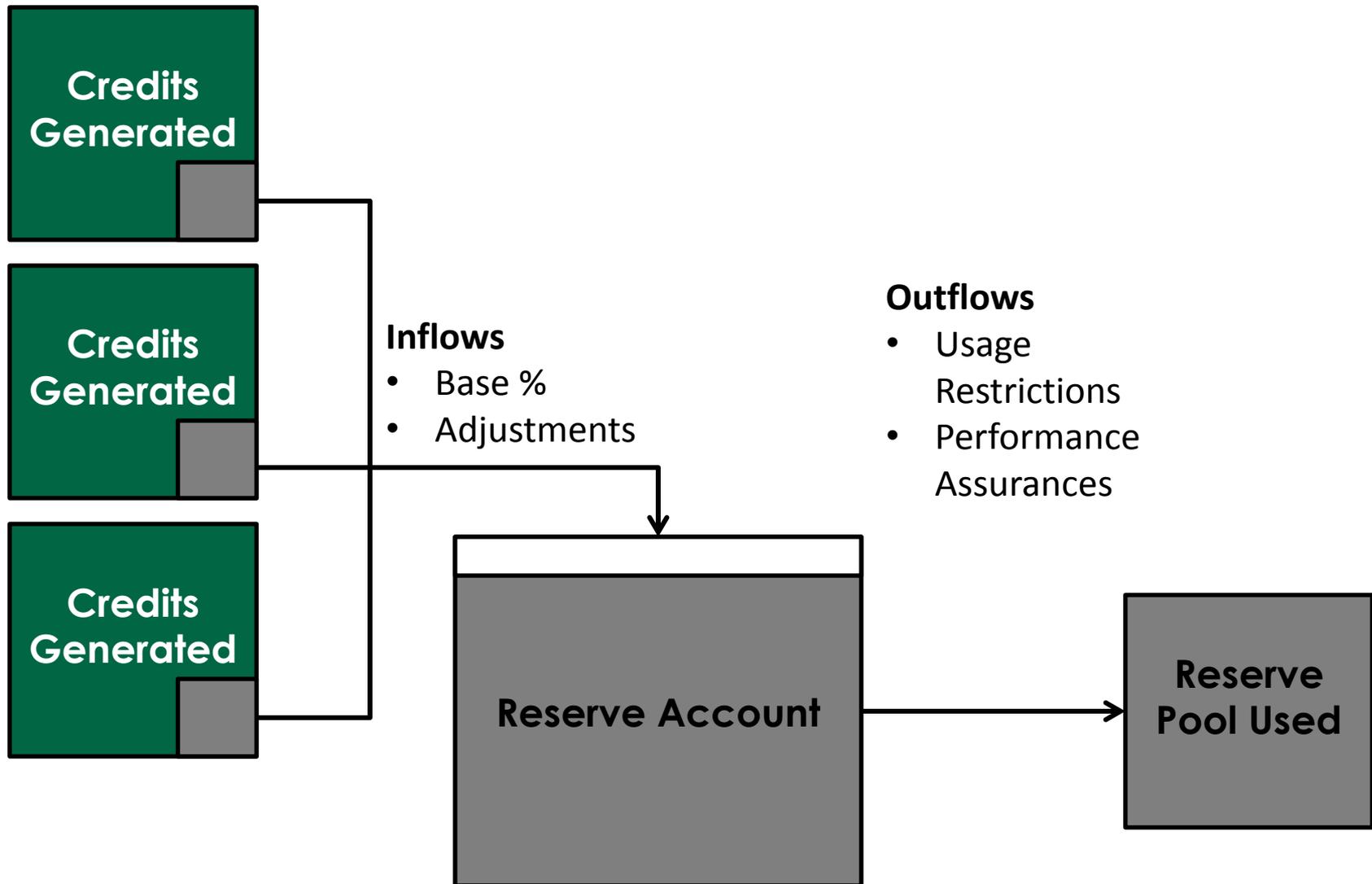
- Sell, Transfer or Retire Credits
- Report Accomplishments

TRACK & TRANSFER CONSIDERATIONS

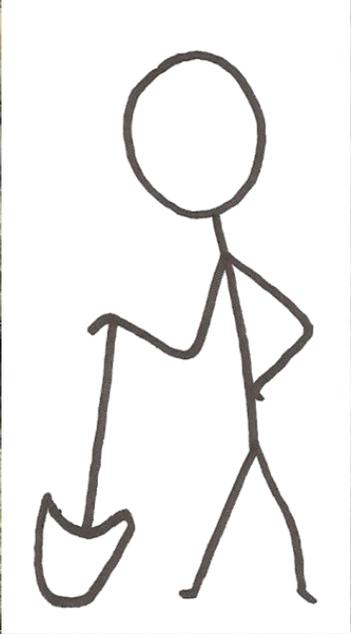
How many credits does Susan have to sell to a buyer?

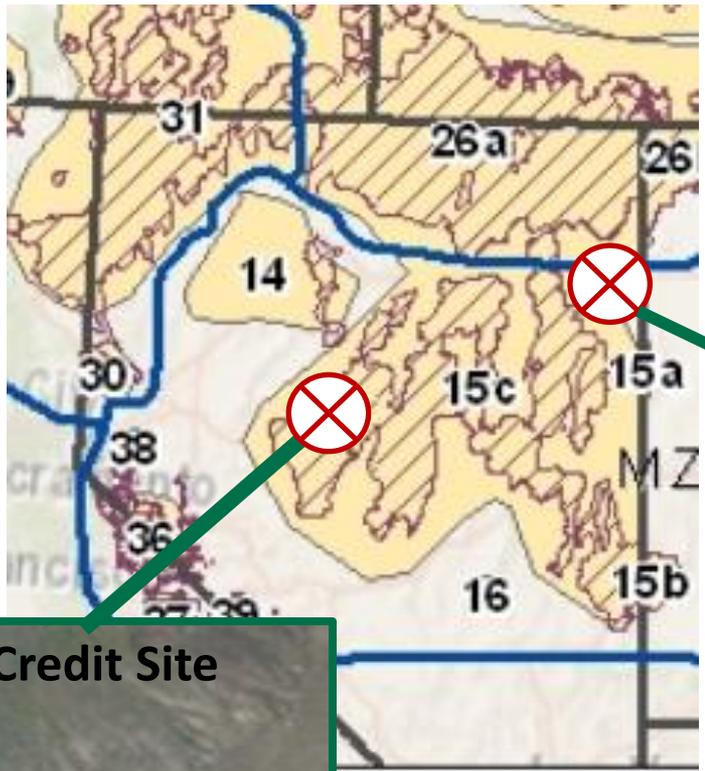
Reserve Account - How does the Administrator ensure that there are always more credits than debits in the program?

RESERVE ACCOUNT

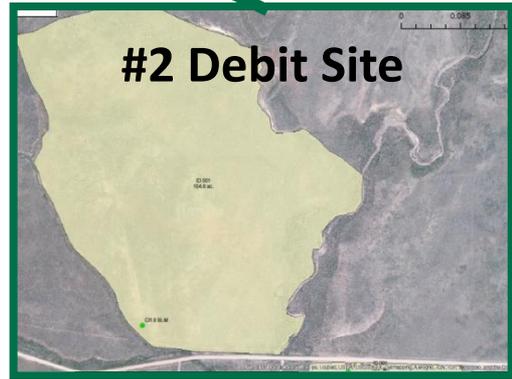


**Reserve Account
(70 Credits)**

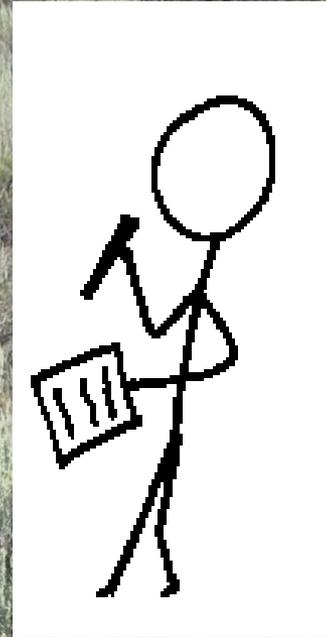




-  Management Zones
-  Sage-Grouse PACs
-  GSG Populations



#2. DEBIT SITE



INDICATE INTEREST



Contact Administrator to provide basic information

DETERMINE CREDIT NEED

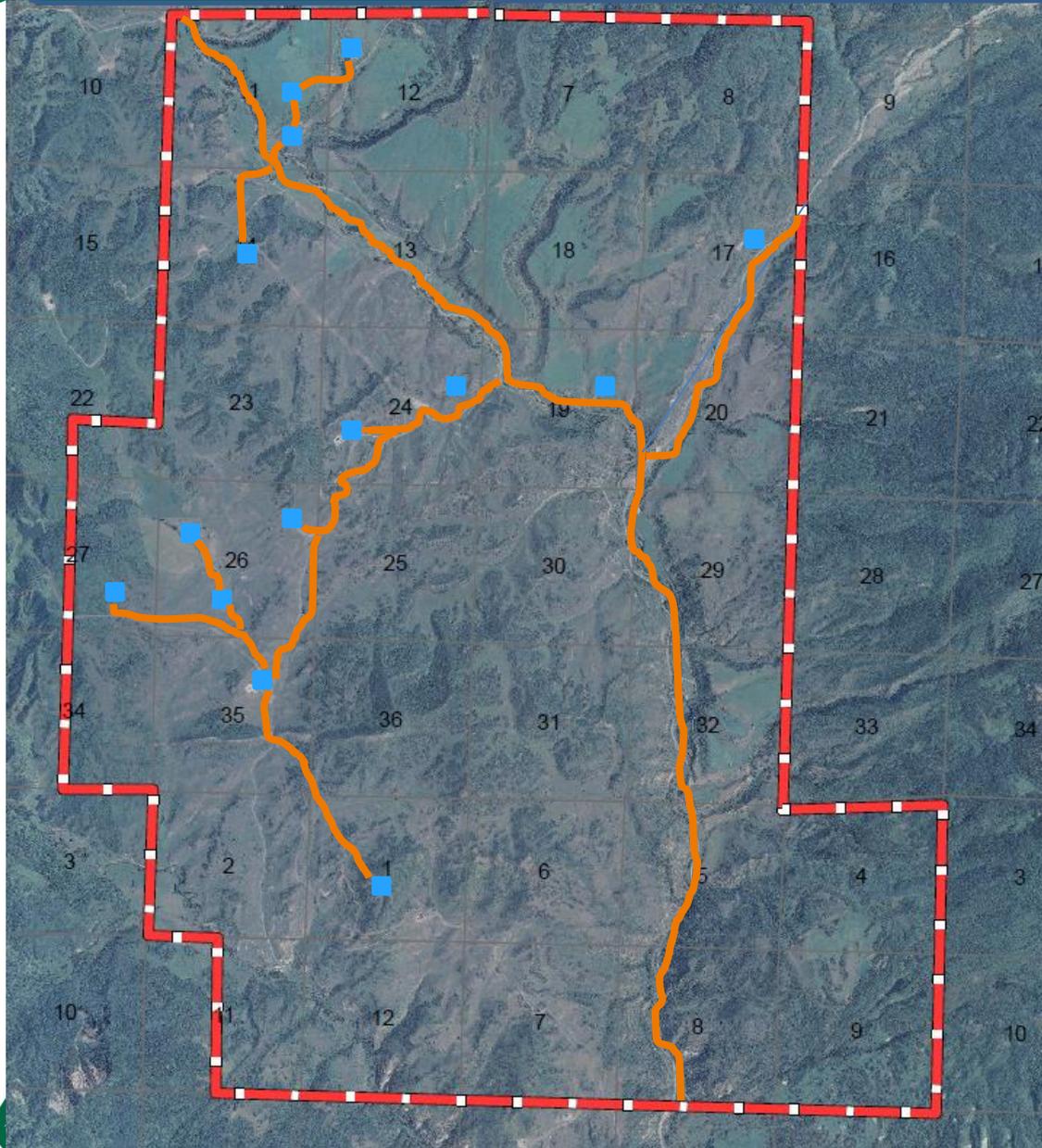


- Develop project plan
- Calculate anticipated debits
- Submit documentation

1

Conduct Pre-Field Visit Desktop Analysis

- Digitize the project area
- Draw avoidance distances
- Delineate map units based



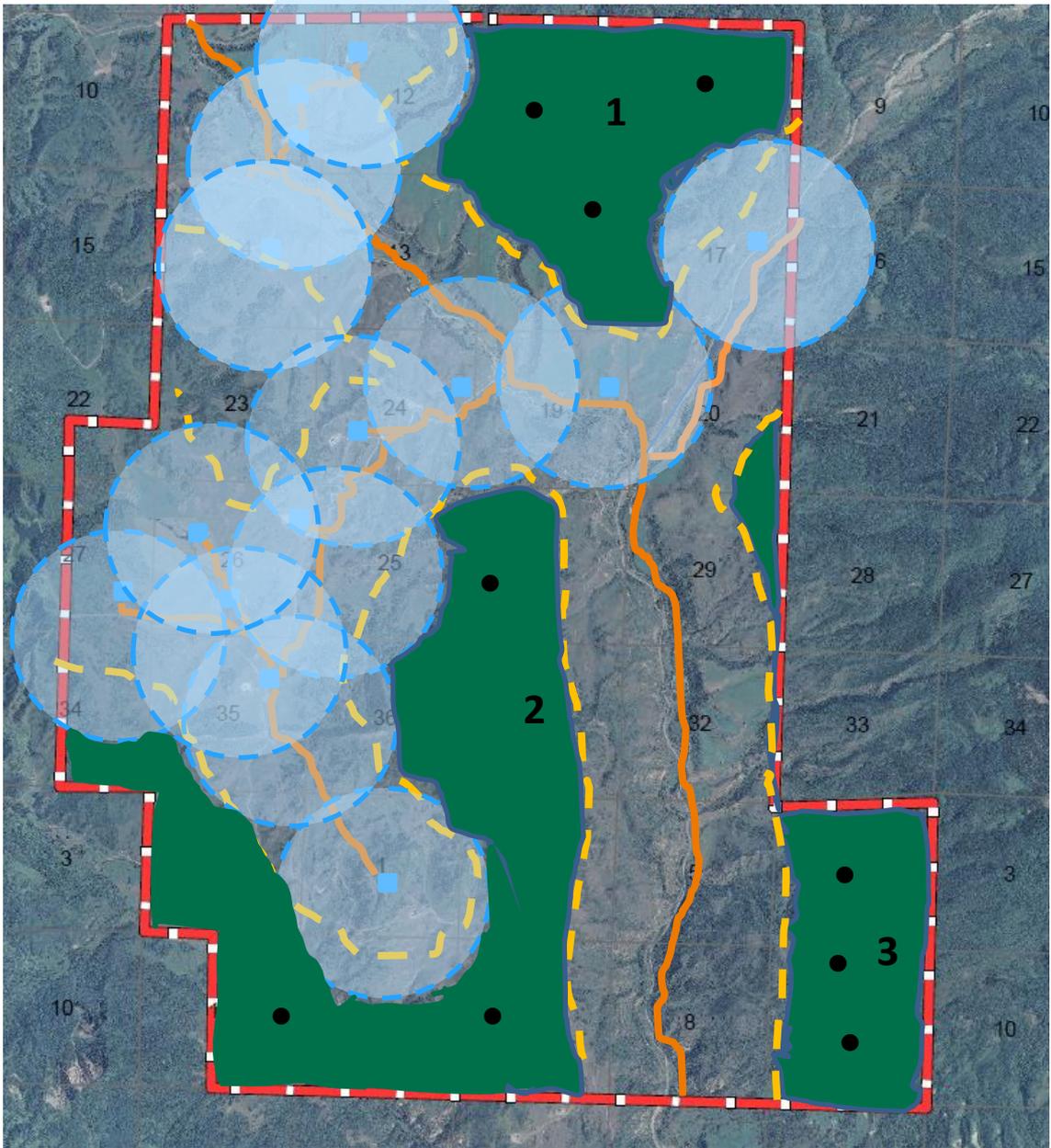
Pre-Project

- 1,000 acre site
- Infill well development

KEY

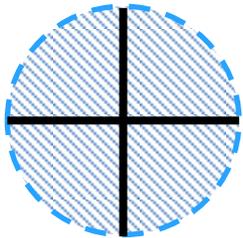
- Existing Roads
- Existing Well Pads/
Producing Wells

1 mi (1.6 km)



Pre-Project w/ Well Buffers

- 1,000 acre site
- Infill gas well development



KEY

- Existing Roads
- - - Road Buffers
- Existing Well Pads/
Producing Wells
- Well pad buffers
- #** Map Units

1 mi (1.6 km)

2

Conduct Field Visit

- Confirm location of any anthropogenic structures
- Confirm map units and sampling protocol
- Collect field data using the datasheet



EcoMetric
SAGE GROUSE Attribute Measurements

Revised 07-01-13

Date: 07-06-13 Observers: All

UTM E: 0256672

Site Name: Ayal CRP

UTM N: 4469498 13T NA983

Slope:

Aspect: 350°/1°

Camera / Photo #'s: TT

Site is ARID or MESIC (circle one)

GRASS and FORB COVER (Small Plots)

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SAGEBRUSH COVER (30m x 30m)

% Estimated Sagebrush Canopy Cover for Plot:

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8			18			28		
9			19			29		
10			20			30		

3

Calculate Debits

- Enter data into calculator
- Calculate breeding, summer, and winter scores for each map unit

Collect Field Data



Calculate Change in Habitat Function

- Sagebrush height: xx cm
- Sagebrush canopy cover: xx%

above personal
 EcoMetric
 SAGE GROUSE Attribute Measurements
 Revised 07-01-13

Date: 07-08-13 Observers: All UTM E: 0256672
 Site Name: Ayal CAP UTM N: 4469498 13T 14083
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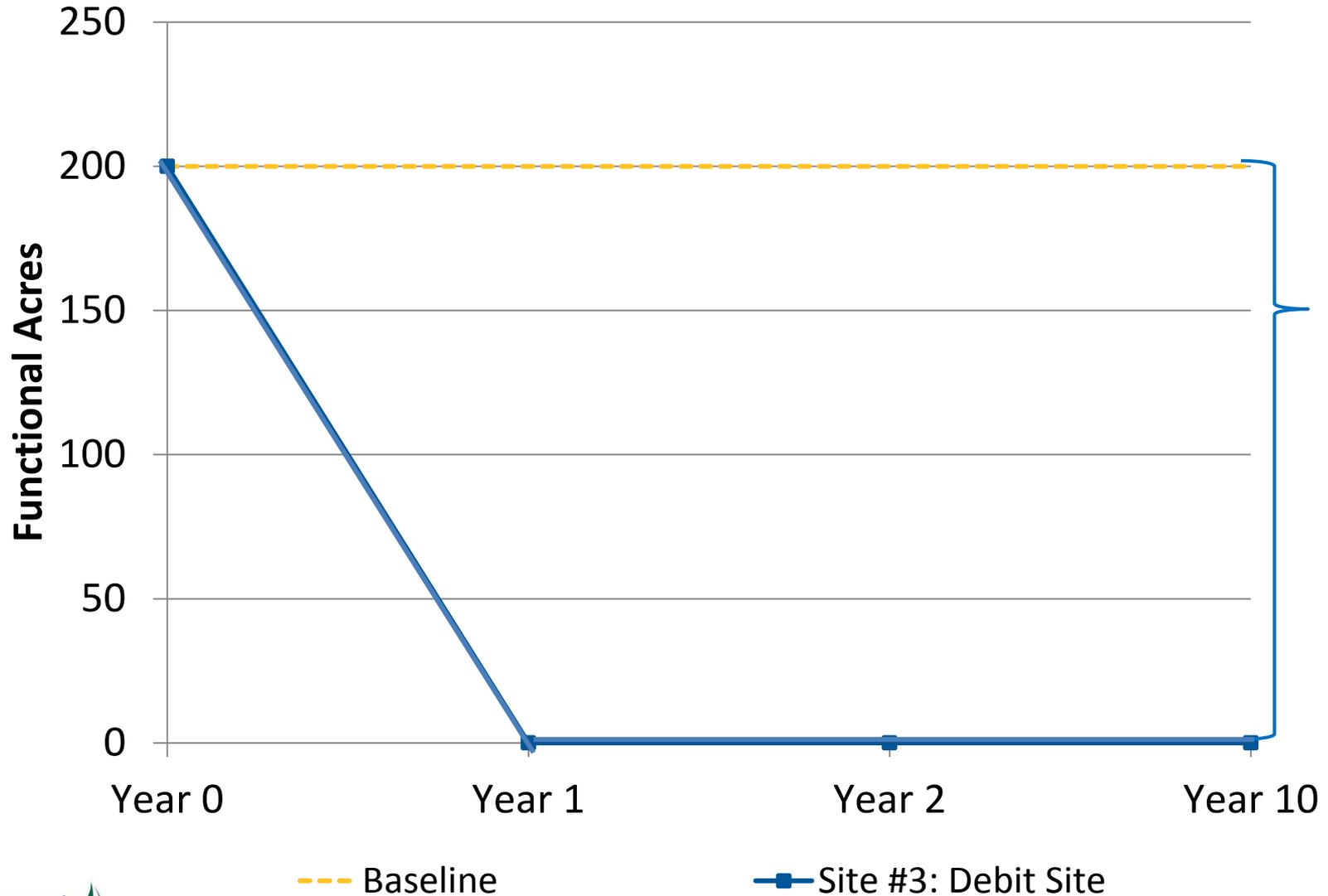
Debit Project Summary

- 1,000 Acres
- Impact project that reduces 20% habitat quality to 0% function post-project
- Low priority habitat area
- 20 year project

DEBIT CALCULATION CONSIDERATIONS

Baseline – What is the starting point for Energy Company X to measure credits needed to offset their impact?

DEBIT BASELINE PRE-PROJECT CONDITION



DEBIT CALCULATION CONSIDERATIONS

Mitigation Ratios – How can the Administrator be sure that there are never less credits than debits under the program?

MITIGATION RATIOS

Debits
(# Functional
acres lost)

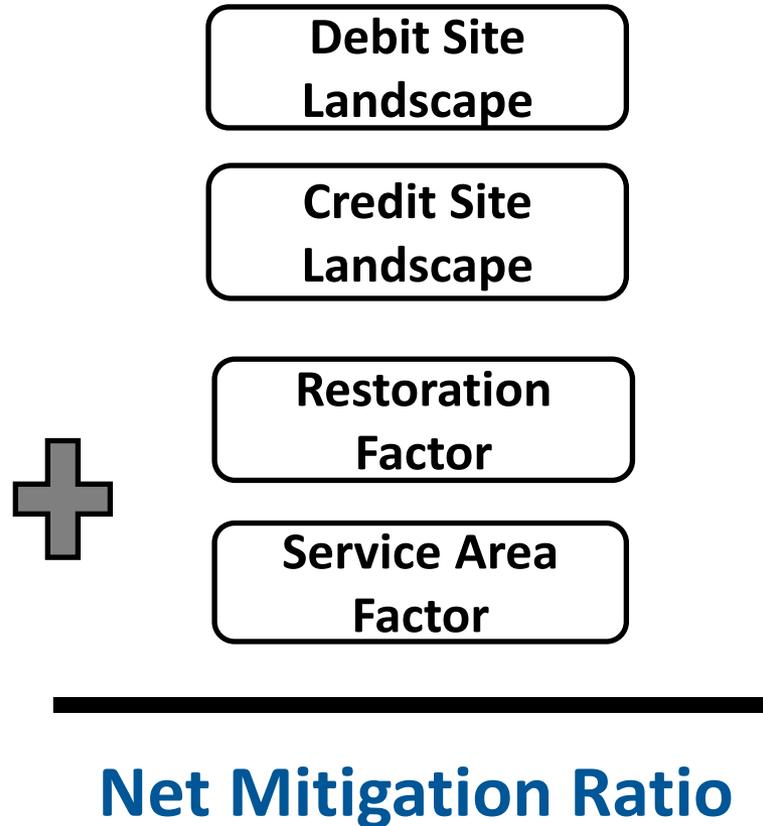


Net Mitigation
Ratio



Credit
Obligation

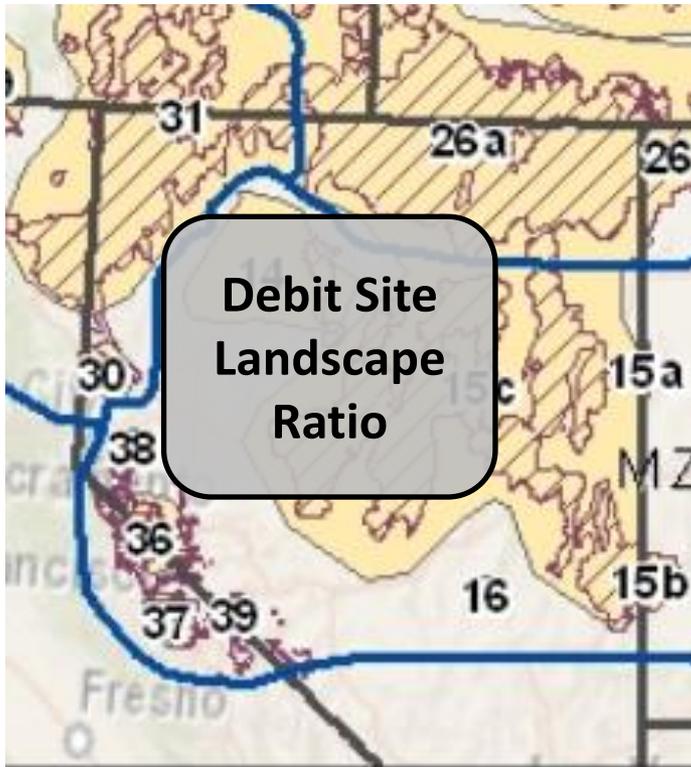
MITIGATION RATIOS



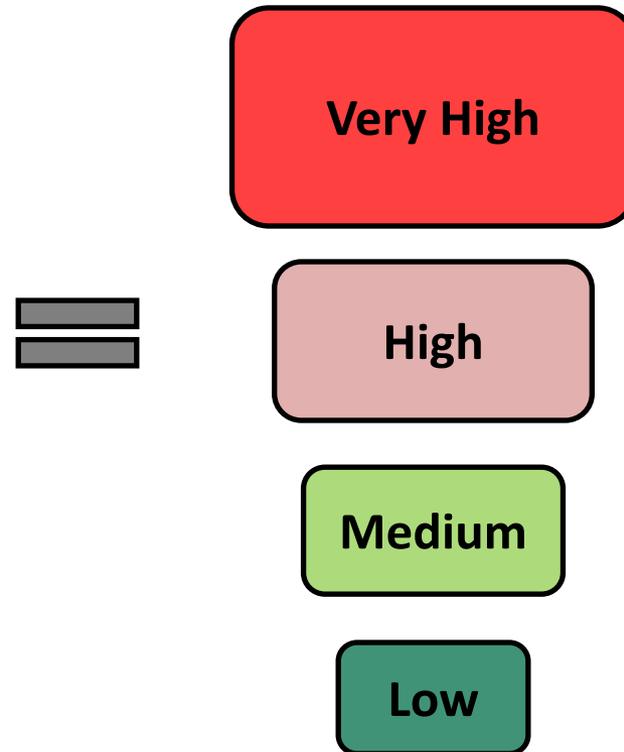
MITIGATION RATIOS

DEBIT SITE LANDSCAPE RATIO

Where is the debit site located?



Ratio based on priority level for conservation & recovery



DEBIT CALCULATION CONSIDERATIONS

Other considerations to be reviewed by the Committee

- Debit Variability
- Project Life
- Regulatory Assurances

ACQUIRE CREDITS



- Create Registry account
- Calculate anticipated debits
- Submit documentation



Revised 07-01-13

EcoMetric
SAGE GROUP Attribute Measurements

Date: 07-01-13 Observers: All
 Site Name: 13T NA083
 Slope: 350% ± 1°
 Camera / Photo #s: TT
 Site: ARID or MESIC (circle one)

UTM E: 0256672
 UTM N: 4469498

GRASS and FORB COVER (Small Plots)

Quad #	Native Grass Cover	GRASS Cover	Grass Height	Native FORB Cover	Species in Quad	% Native or Desirable FORB Cover	% Invasive FORB Cover	Distance to Suitable Cover/Refugia
1	10-25	10-25	12"	0	2	22	0	
2	10-25	10-25	12"	0	1	22	0	
3	10-25	10-25	12"	0	1	22	0	
4	10-25	10-25	9"	0	2	22	0	
5	10-25	10-25	9"	0	1	22	0	
6	0	25-50	11"	0	1	22	0	
7	10-25	10-25	13"	0	1	22	0	
8	0	25-50	12"	0	1	22	0	
9	0	10-25	12"	0	2	22	0	
10	25-50	25-50	12"	0	1	22	0	

SAGEBRUSH COVER (30m x 30m)

% Estimated Sagebrush Canopy Cover for Plot:

#	Sage Height	Columnar / Spreading	#	Sage Height	Columnar / Spreading	#	Sage Height	Columnar / Spreading
1			11			21		
2			12			22		
3			13			23		
4			14			24		
5			15			25		
6			16			26		
7			17			27		
8			18			28		
9			19			29		
10			20			30		



ACQUIRE CREDITS CONSIDERATIONS

Debit Verification – How can the Administrator be sure that Energy Company X took an accurate measurement of the change in habitat quality on-site?

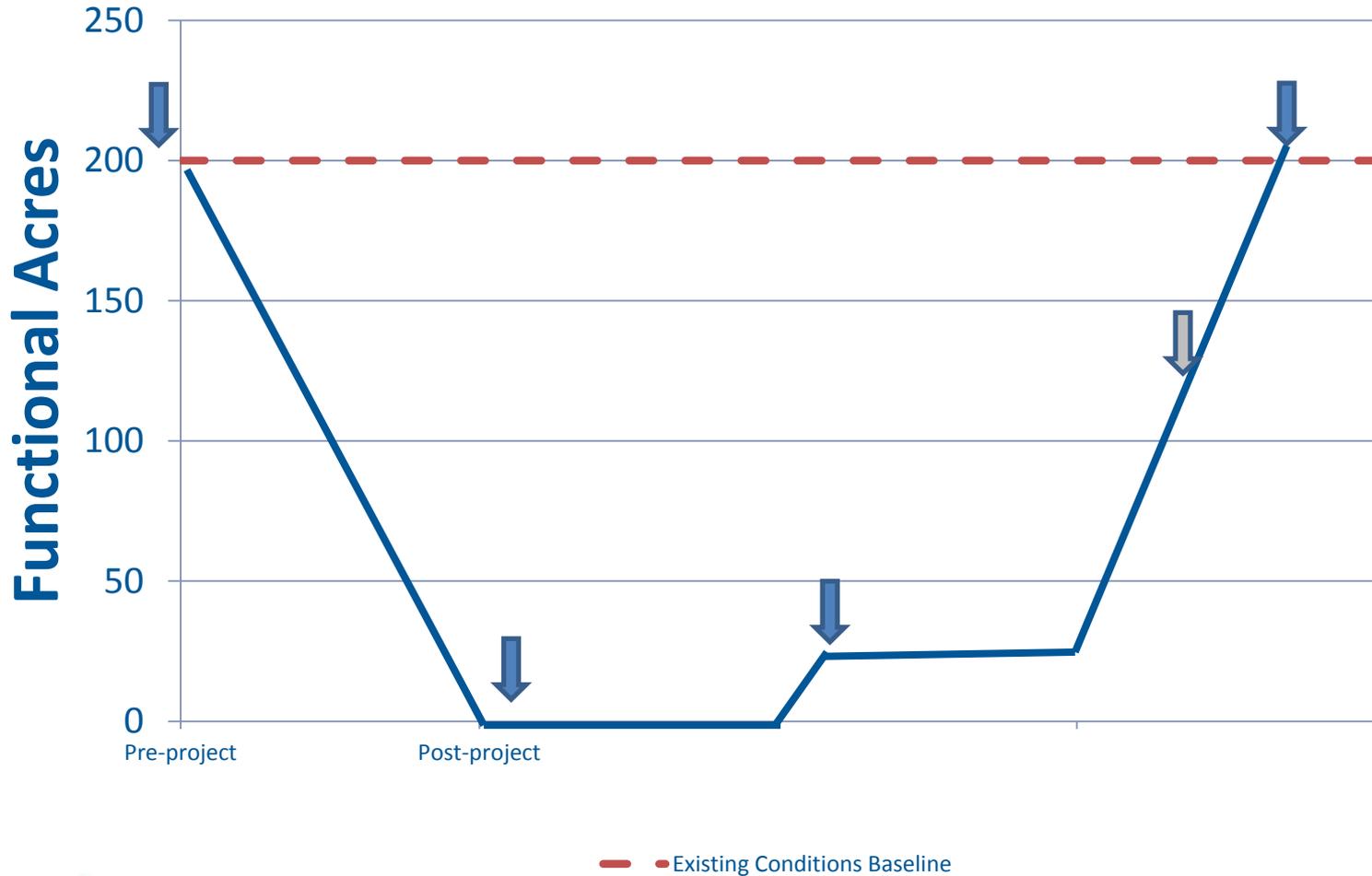
DEBIT VERIFICATION

1. Before debit project begins
2. During project implementation period
3. When debits end or decrease
4. Periodic spot checks and audits

DEBIT VERIFICATION

Verification ↓

Spot Checks & Audits ↓



TRACK & TRANSFER



- Purchase Credits
- Report Accomplishments